

In re Patent Application of:

DOHLE ET AL

Serial No. 10/732,777

Filed: DECEMBER 10, 2003

IN THE DESCRIPTION

Please replace paragraph [18] with the following amended paragraph:

[18] Fig. 1A is a schematic illustration of a P-N junction semiconductor laser subassembly 1 comprising semiconductor laser 11 affixed to electrical contacts 21 and 31 on the P-side 22 and the N-side 32 respectively. -The relative dimensions of the laser subassembly shown in this as well as in other figures are not intended to be significant; however, the present invention may be used advantageously with laser diodes formed in the shape of a bar having at least one dimension that is on the order of a centimeter (cm).

Please replace paragraph [19] with the following amended paragraph:

[19] The subassembly shown in Fig. 1A may be used in laser modules having circuits that carry electrical current to and from multiple locations along the lengths of electrical contacts 21 and 31. ~~For~~ For example, the subassembly may be used in laser modules comprising multiple wires in parallel that are bonded to electrical contacts 21 or 31 at multiple points along the length of the contacts. Alternatively, the subassembly may be used in laser modules comprising large area terminals that are affixed to the surface of contacts 21 or 31.

Please replace paragraph [26] with the following amended paragraph:

[26] Fig. 3 is a schematic cross-sectional illustration of electrical contact structure ~~30~~ 31 comprising component 51 of

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a first material having plated layers 61, 62 of a second material. The first and second materials, thickness of the component and thicknesses of the plated layers 61,62 of the second material are all selected to provide a contact structure having desired properties including its coefficient of thermal expansion (CTE), electrical conductivity, and overall physical thickness. Thermal conductivity may also be taken into account.

Please replace paragraph [35] with the following amended paragraph:

[35] This particular example includes two plated Cu layers of equal thickness. In principle, only one plated layer or two plated layers of unequal thickness may be used. The relative thicknesses may be adjusted as necessary to provide the desired CTE and electrical resistance. Two layers of equal thickness are preferred, however, because this particular structure will have essentially no bending or bowing caused by unequal thermal expansion of the two materials. In other words, the stress imposed by one of the bi-metallic junctions on one surface of the structure will be cancelled by the stress imposed by the bi-metallic junction on the opposite surface.

Please replace paragraph [39] with the following amended paragraph:

[39] Fig. 4 is a schematic illustration of an electrical contact structure component 31 whose outline is etched in a sheet of material 50. Fig. 5 is a schematic illustration of a sheet of material 50 in which a plurality of electrical contact structure components 31 have been etched. One or more legs 42 52 attach each component to the surrounding sheet.

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Preferably, each leg is etched with a shape that facilitates separating the components from the sheet. For example, this may be accomplished by narrowing the width of each leg at or near the edge of component, as shown in the figure.